



**NATIONAL  
CYBERSECURITY  
ALLIANCE**

About Us

# **We empower a more secure, interconnected world.**

Our alliance stands for the safe and secure use of all technology.

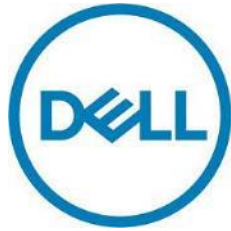
We encourage everyone to do their part to prevent digital wrongdoing of any kind.

We build strong partnerships, educate and inspire all to take action to protect ourselves, our families, organizations and nations.

Only together can we realize a more secure, interconnected world.



## Our Board Members



Reach

**Millions of people turn to  
the National Cybersecurity  
Alliance for information**

- 2+ million pageviews  
StaySafeOnline.org
- 370,000+ social media  
followers
- Hundreds of free resources
- Thousands of webinar  
attendees

## Champions Toolkits

- PDF Campaign guide
- Social media posts
- Social media graphics
- Sample articles
- Sample press release
- Video conference background
- Email signature
- Logos and badges
- Infographics and tip sheets



**NATIONAL  
CYBERSECURITY  
ALLIANCE**

# **A Whole Lotta BS (Behavioral Science) about Cybersecurity**

Lisa Plaggemier  
Executive Director



# Periodic Table of the Elements

1 1IA 1A																	18 VIIIA 8A
1 <b>H</b> Hydrogen 1.008	2 IIA 2A											13 IIIA 3A	14 IVA 4A	15 VA 5A	16 VIA 6A	17 VIIA 7A	2 <b>He</b> Helium 4.003
3 <b>Li</b> Lithium 6.941	4 <b>Be</b> Beryllium 9.012											5 <b>B</b> Boron 10.811	6 <b>C</b> Carbon 12.011	7 <b>N</b> Nitrogen 14.007	8 <b>O</b> Oxygen 15.999	9 <b>F</b> Fluorine 18.998	10 <b>Ne</b> Neon 20.180
11 <b>Na</b> Sodium 22.99	12 <b>Mg</b> Magnesium 24.305	3 IIIB 3B	4 IVB 4B	5 VB 5B	6 VIB 6B	7 VIIB 7B	8 VIII 8	9 VIII 8	10 VIII 8	11 IB 1B	12 IIB 2B	13 <b>Al</b> Aluminum 26.982	14 <b>Si</b> Silicon 28.086	15 <b>P</b> Phosphorus 30.974	16 <b>S</b> Sulfur 32.066	17 <b>Cl</b> Chlorine 35.453	18 <b>Ar</b> Argon 39.948
19 <b>K</b> Potassium 39.098	20 <b>Ca</b> Calcium 40.078	21 <b>Sc</b> Scandium 44.956	22 <b>Ti</b> Titanium 47.867	23 <b>V</b> Vanadium 50.942	24 <b>Cr</b> Chromium 51.996	25 <b>Mn</b> Manganese 54.938	26 <b>Fe</b> Iron 55.845	27 <b>Co</b> Cobalt 58.933	28 <b>Ni</b> Nickel 58.693	29 <b>Cu</b> Copper 63.546	30 <b>Zn</b> Zinc 65.38	31 <b>Ga</b> Gallium 69.723	32 <b>Ge</b> Germanium 72.631	33 <b>As</b> Arsenic 74.922	34 <b>Se</b> Selenium 78.971	35 <b>Br</b> Bromine 79.904	36 <b>Kr</b> Krypton 83.789
37 <b>Rb</b> Rubidium 85.468	38 <b>Sr</b> Strontium 87.62	39 <b>Y</b> Yttrium 88.906	40 <b>Zr</b> Zirconium 91.224	41 <b>Nb</b> Niobium 92.906	42 <b>Mo</b> Molybdenum 95.95	43 <b>Tc</b> Technetium 98.907	44 <b>Ru</b> Ruthenium 101.07	45 <b>Rh</b> Rhodium 102.906	46 <b>Pd</b> Palladium 106.42	47 <b>Ag</b> Silver 107.868	48 <b>Cd</b> Cadmium 112.414	49 <b>In</b> Indium 114.818	50 <b>Sn</b> Tin 118.711	51 <b>Sb</b> Antimony 121.760	52 <b>Te</b> Tellurium 127.6	53 <b>I</b> Iodine 126.904	54 <b>Xe</b> Xenon 131.294
55 <b>Cs</b> Cesium 132.905	56 <b>Ba</b> Barium 137.328	57-71	72 <b>Hf</b> Hafnium 178.49	73 <b>Ta</b> Tantalum 180.948	74 <b>W</b> Tungsten 183.84	75 <b>Re</b> Rhenium 186.207	76 <b>Os</b> Osmium 190.23	77 <b>Ir</b> Iridium 192.217	78 <b>Pt</b> Platinum 195.085	79 <b>Au</b> Gold 196.967	80 <b>Hg</b> Mercury 200.592	81 <b>Tl</b> Thallium 204.383	82 <b>Pb</b> Lead 207.2	83 <b>Bi</b> Bismuth 208.980	84 <b>Po</b> Polonium [208.982]	85 <b>At</b> Astatine 209.987	86 <b>Rn</b> Radon 222.018
87 <b>Fr</b> Francium 223.020	88 <b>Ra</b> Radium 226.025	89-103	104 <b>Rf</b> Rutherfordium [261]	105 <b>Db</b> Dubnium [262]	106 <b>Sg</b> Seaborgium [266]	107 <b>Bh</b> Bohrium [264]	108 <b>Hs</b> Hassium [269]	109 <b>Mt</b> Meitnerium [278]	110 <b>Ds</b> Darmstadtium [281]	111 <b>Rg</b> Roentgenium [280]	112 <b>Cn</b> Copernicium [285]	113 <b>Nh</b> Nihonium [286]	114 <b>Fl</b> Flerovium [289]	115 <b>Mc</b> Moscovium [286]	116 <b>Lv</b> Livermorium [293]	117 <b>Ts</b> Tennessine [294]	118 <b>Og</b> Oganesson [294]

Lanthanide Series

57 <b>La</b> Lanthanum 138.905	58 <b>Ce</b> Cerium 140.116	59 <b>Pr</b> Praseodymium 140.908	60 <b>Nd</b> Neodymium 144.243	61 <b>Pm</b> Promethium 144.913	62 <b>Sm</b> Samarium 150.36	63 <b>Eu</b> Europium 151.964	64 <b>Gd</b> Gadolinium 157.25	65 <b>Tb</b> Terbium 158.925	66 <b>Dy</b> Dysprosium 162.500	67 <b>Ho</b> Holmium 164.930	68 <b>Er</b> Erbium 167.259	69 <b>Tm</b> Thulium 168.934	70 <b>Yb</b> Ytterbium 173.055	71 <b>Lu</b> Lutetium 174.967
-----------------------------------------	--------------------------------------	--------------------------------------------	-----------------------------------------	------------------------------------------	---------------------------------------	----------------------------------------	-----------------------------------------	---------------------------------------	------------------------------------------	---------------------------------------	--------------------------------------	---------------------------------------	-----------------------------------------	----------------------------------------

Actinide Series

89 <b>Ac</b> Actinium 227.028	90 <b>Th</b> Thorium 232.038	91 <b>Pa</b> Protactinium 231.036	92 <b>U</b> Uranium 238.029	93 <b>Np</b> Neptunium 237.048	94 <b>Pu</b> Plutonium 244.064	95 <b>Am</b> Americium 243.061	96 <b>Cm</b> Curium 247.070	97 <b>Bk</b> Berkelium 247.070	98 <b>Cf</b> Californium 251.080	99 <b>Es</b> Einsteinium [254]	100 <b>Fm</b> Fermium 257.095	101 <b>Md</b> Mendelevium 258.1	102 <b>No</b> Nobelium 259.101	103 <b>Lr</b> Lawrencium [262]
----------------------------------------	---------------------------------------	--------------------------------------------	--------------------------------------	-----------------------------------------	-----------------------------------------	-----------------------------------------	--------------------------------------	-----------------------------------------	-------------------------------------------	-----------------------------------------	----------------------------------------	------------------------------------------	-----------------------------------------	-----------------------------------------

Alkali Metal	Alkaline Earth	Transition Metal	Basic Metal	Semimetal	Nonmetal	Halogen	Noble Gas	Lanthanide	Actinide
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$2C_2H_{11}$

$C_8H_{11}$

$4C_2H_{11}$

$2C_2H_{11}$

$C_8H_{11}$

$8C_3H_{11}$

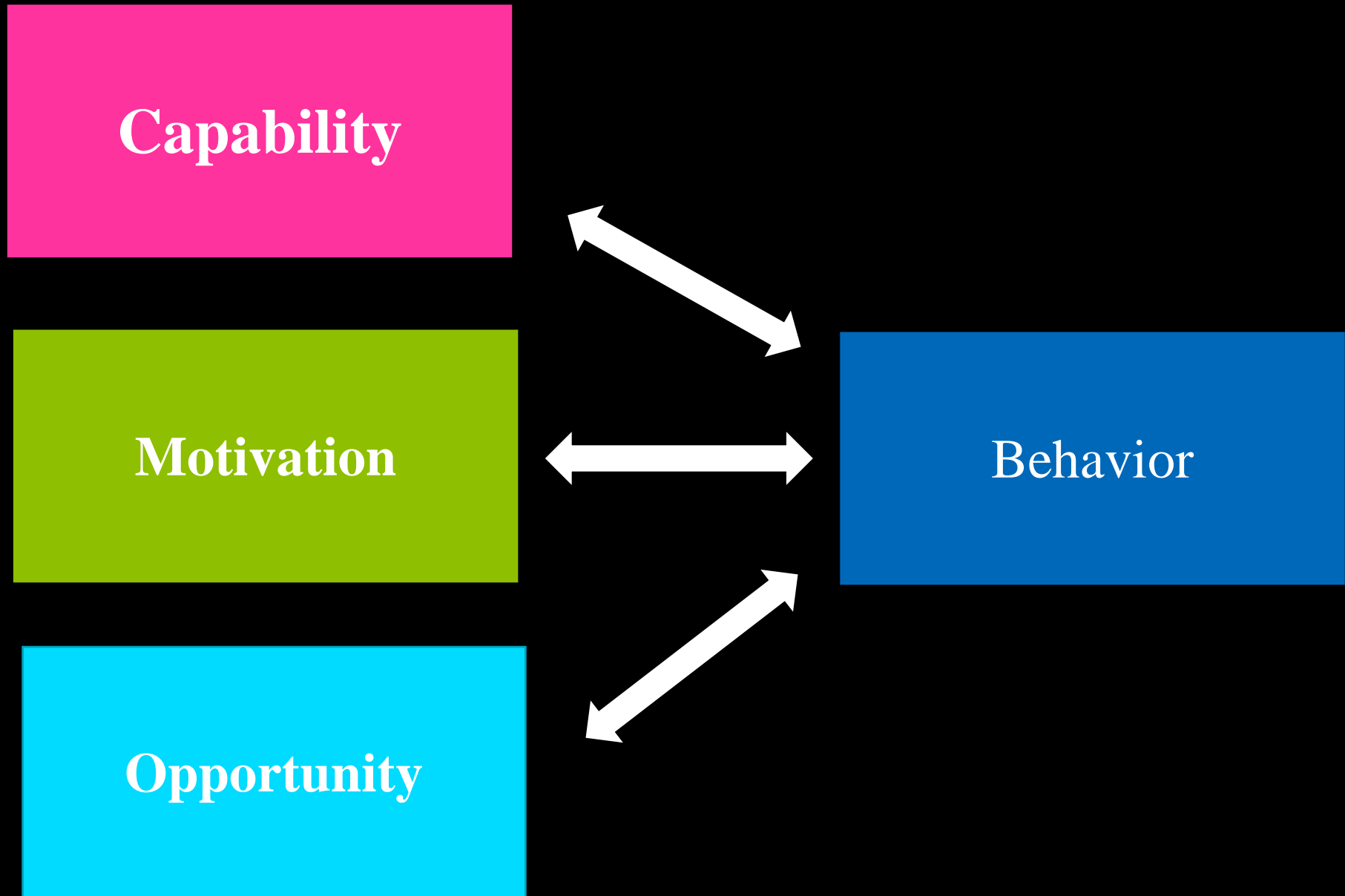
$2C_2H_{11}$

$C_8H_{11}$

$4C_2H_{11}$

$8C_3H_{11}$

$8C_3H_{11}$



2021



**Oh,  
Behave!**

The Annual Cybersecurity  
Attitudes and Behaviors  
Report 2021

2022



**Oh,  
Behave!**

The Annual Cybersecurity  
Attitudes and Behaviors  
Report 2022

2023



**Oh,  
Behave!**

The Annual Cybersecurity  
Attitudes and Behaviors  
Report 2023

# Oh, Behave!

The Annual Cybersecurity Attitudes  
and Behaviors Report 2023



## Security Behaviors

1. Password hygiene: password creation, password management, etc
2. Using Multi-Factor Authentication (MFA)
3. Installing the latest updates
4. Checking emails for signs of phishing
5. Backing up data

“Facts don’t change people’s behavior.  
Emotion changes people’s behavior.”

*Seth Godin*

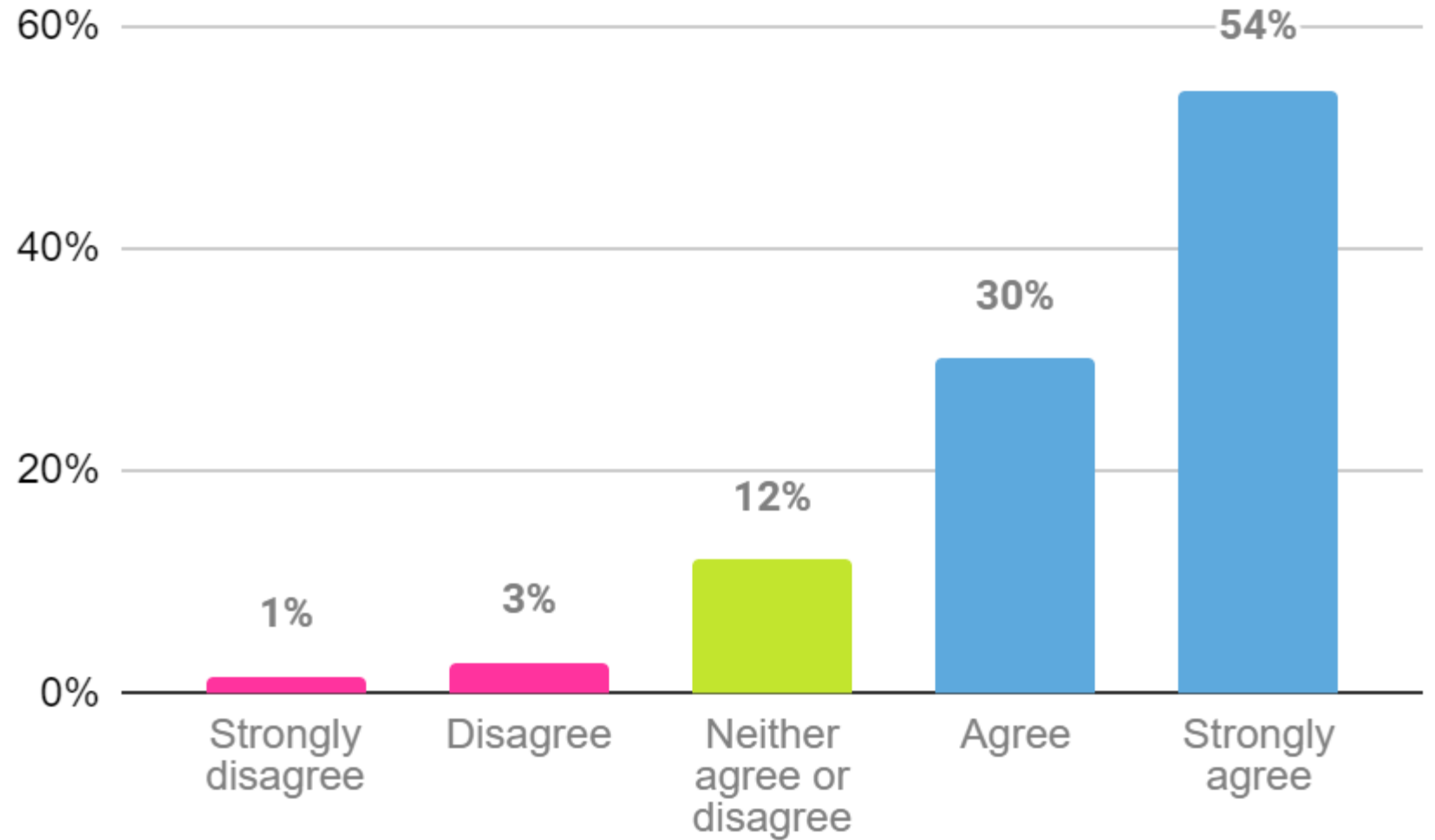
# Feelings

## Prioritizing Cybersecurity

**Q: How do you feel about cyber security?**

Statement:

***“I feel that staying secure online is a priority”***



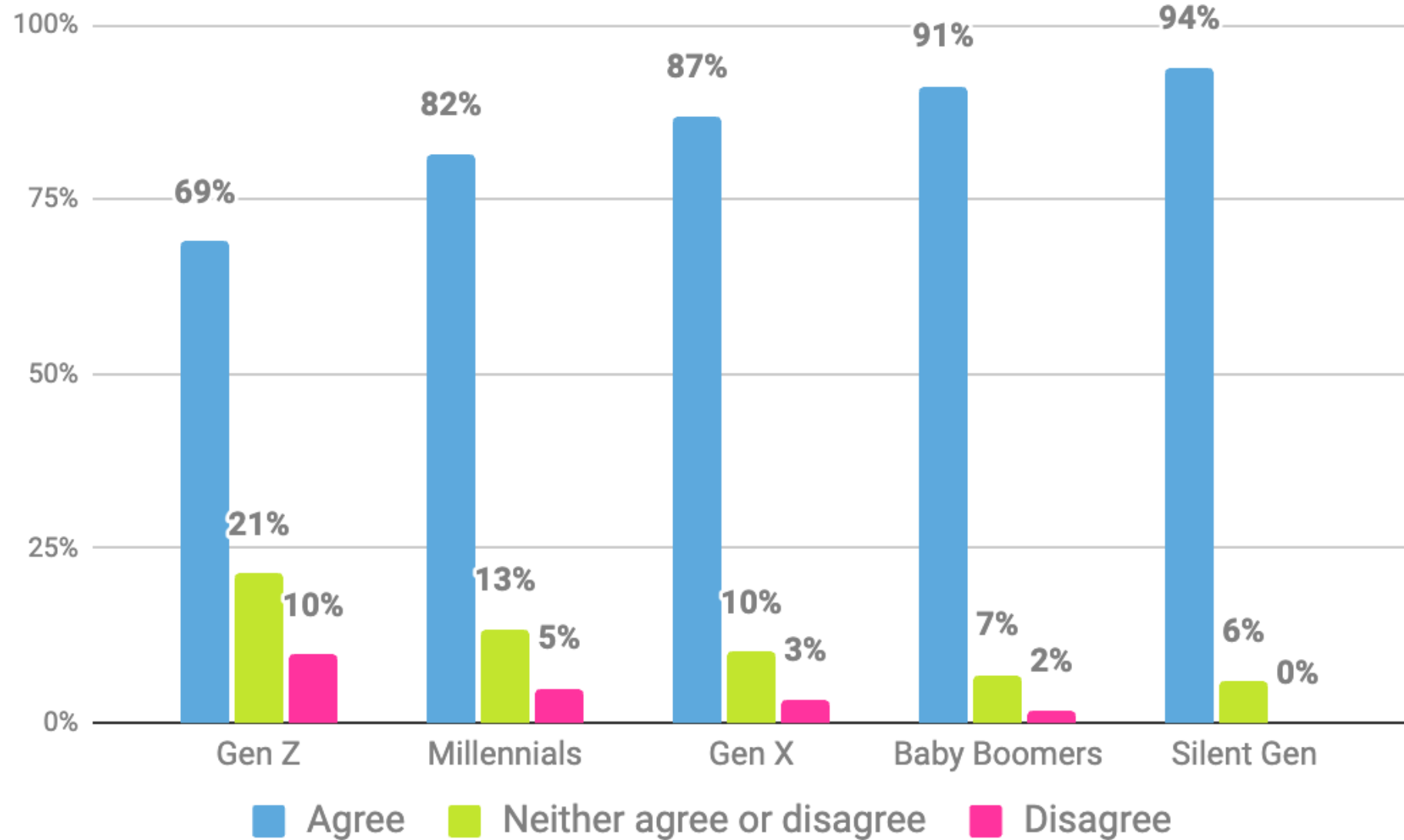


## Prioritizing Cybersecurity

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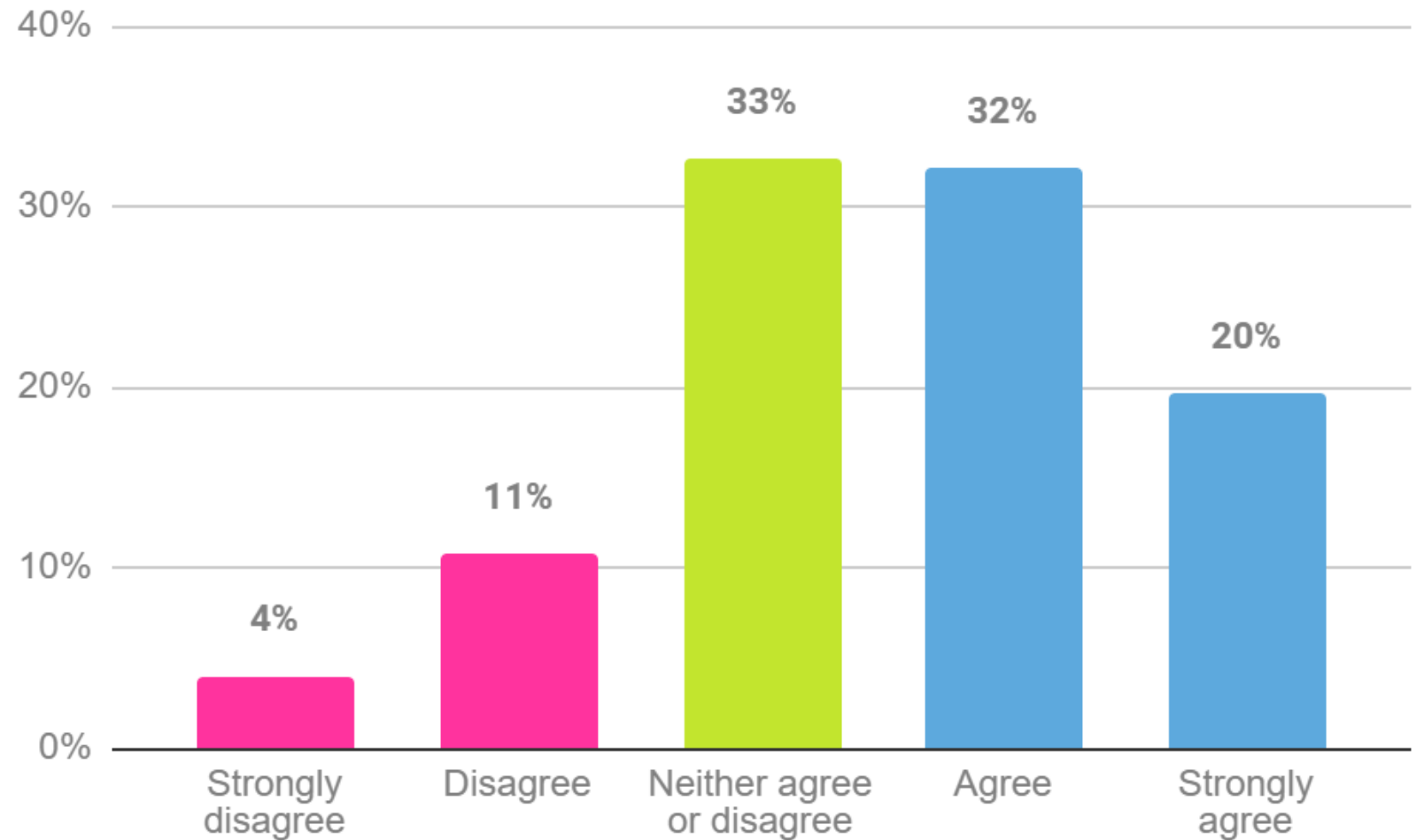


## Feelings

**Q: How do you feel about cyb security?**

**Statement:**

***“Staying secure online is under my control.”***

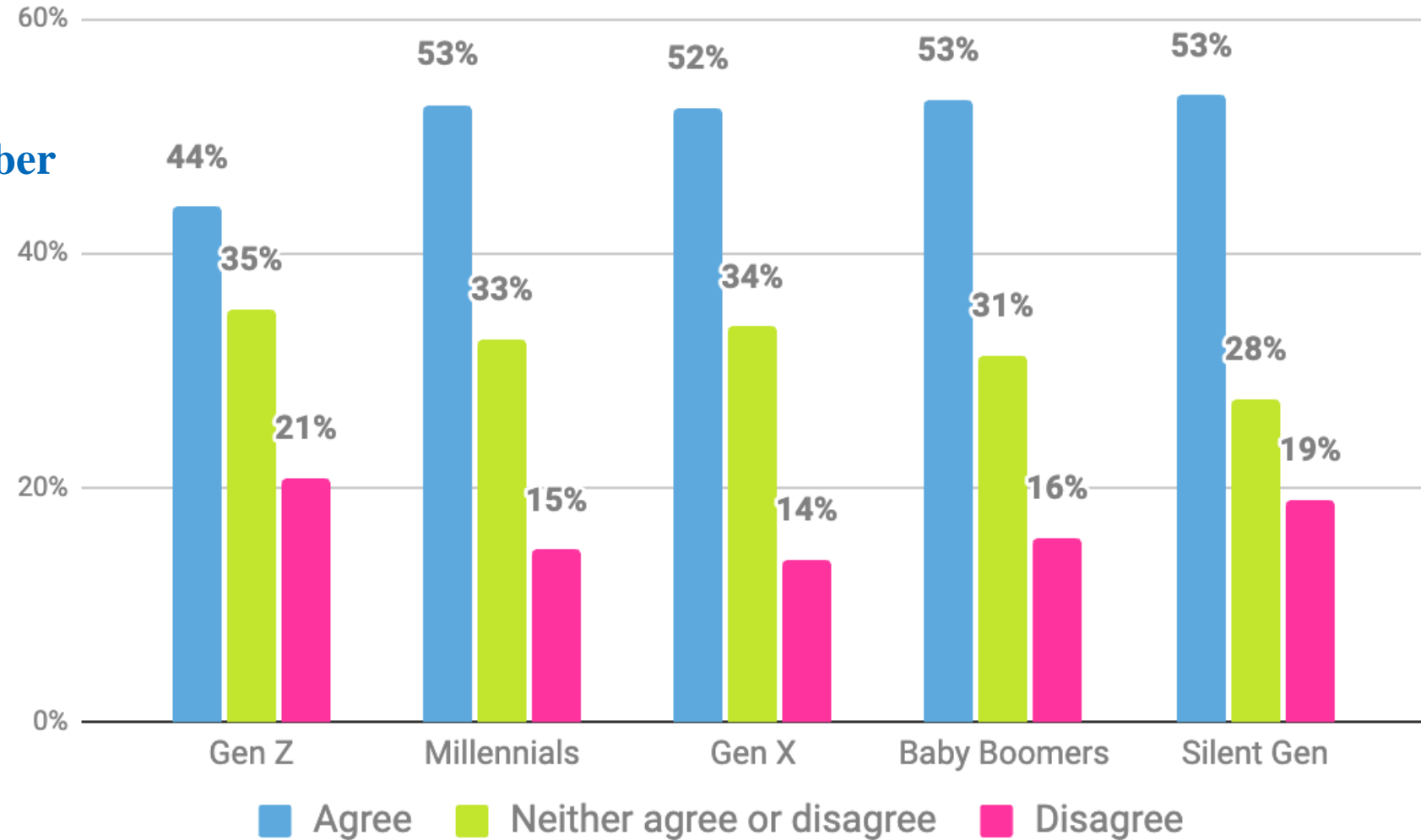


## Feelings

**Q: How do you feel about cyber security?**

**Statement:**

***“Staying secure online is under my control.”***



# Gen Z twice as likely to think cybersecurity isn't worth the effort



By [Ian Barker](#)

Published 1 week ago

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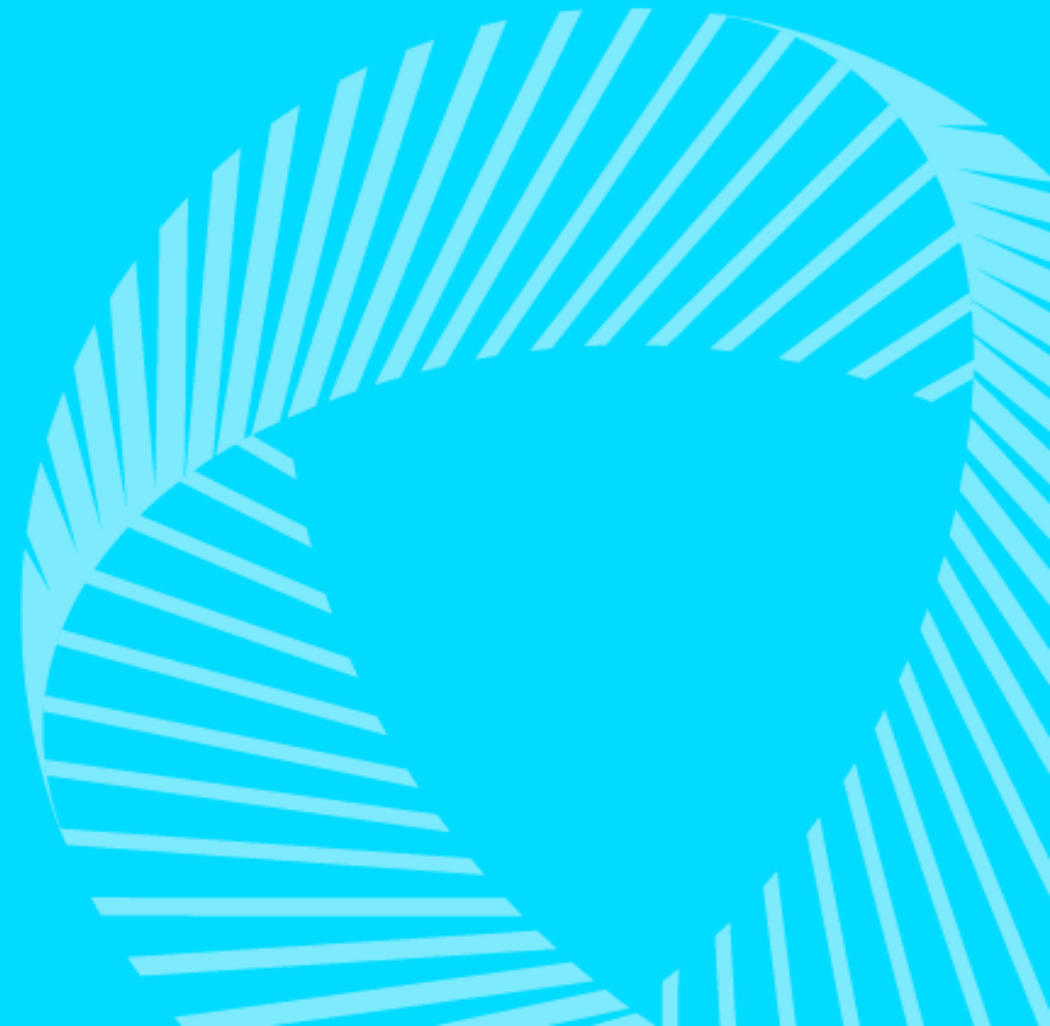
## Learned Helplessness

According to the theory of 'learned helplessness', when people are unable to control or change a situation, they do not try, even when opportunities for change are available.

# Behaviors

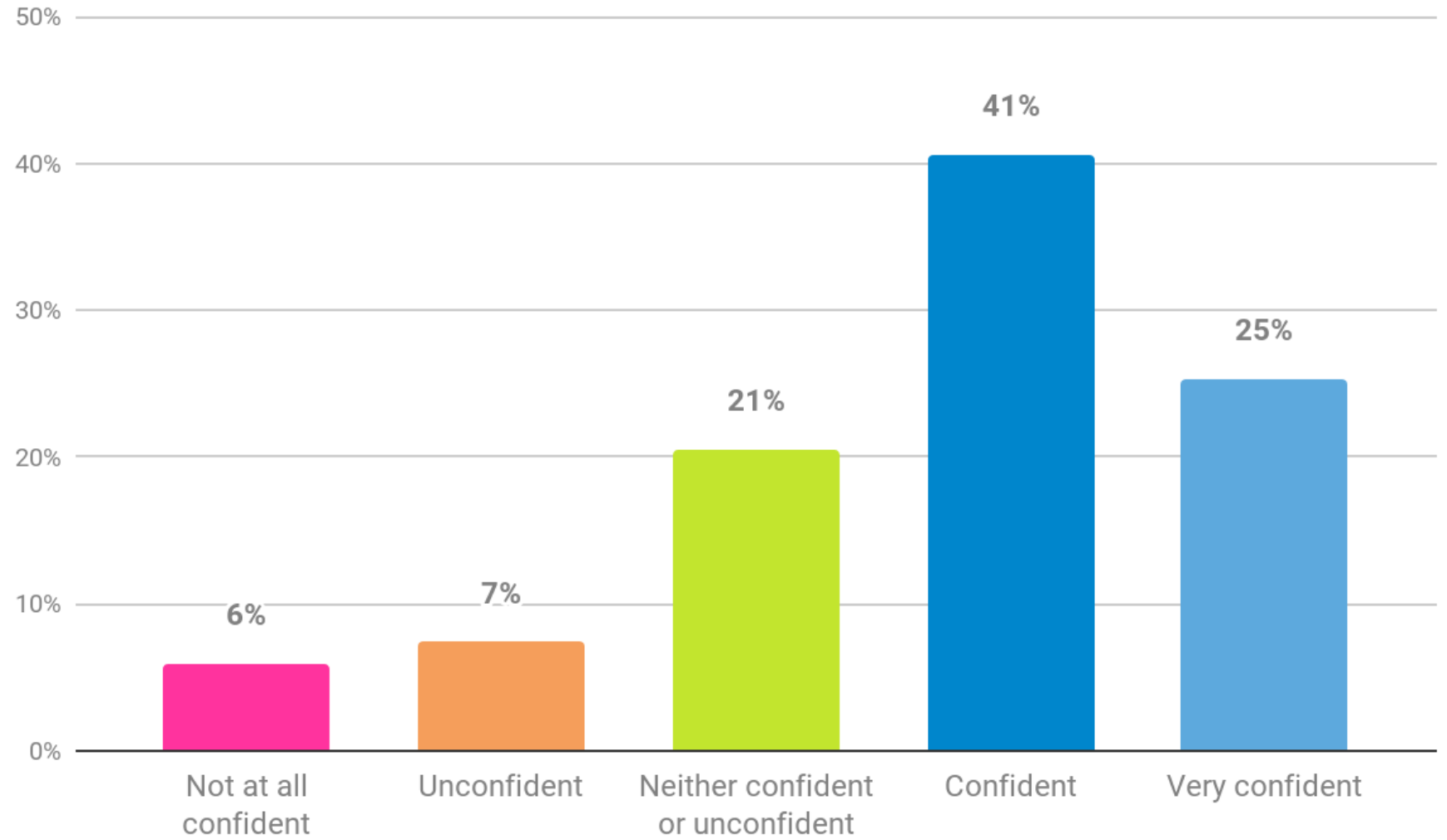
# Phishing

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## Confidence

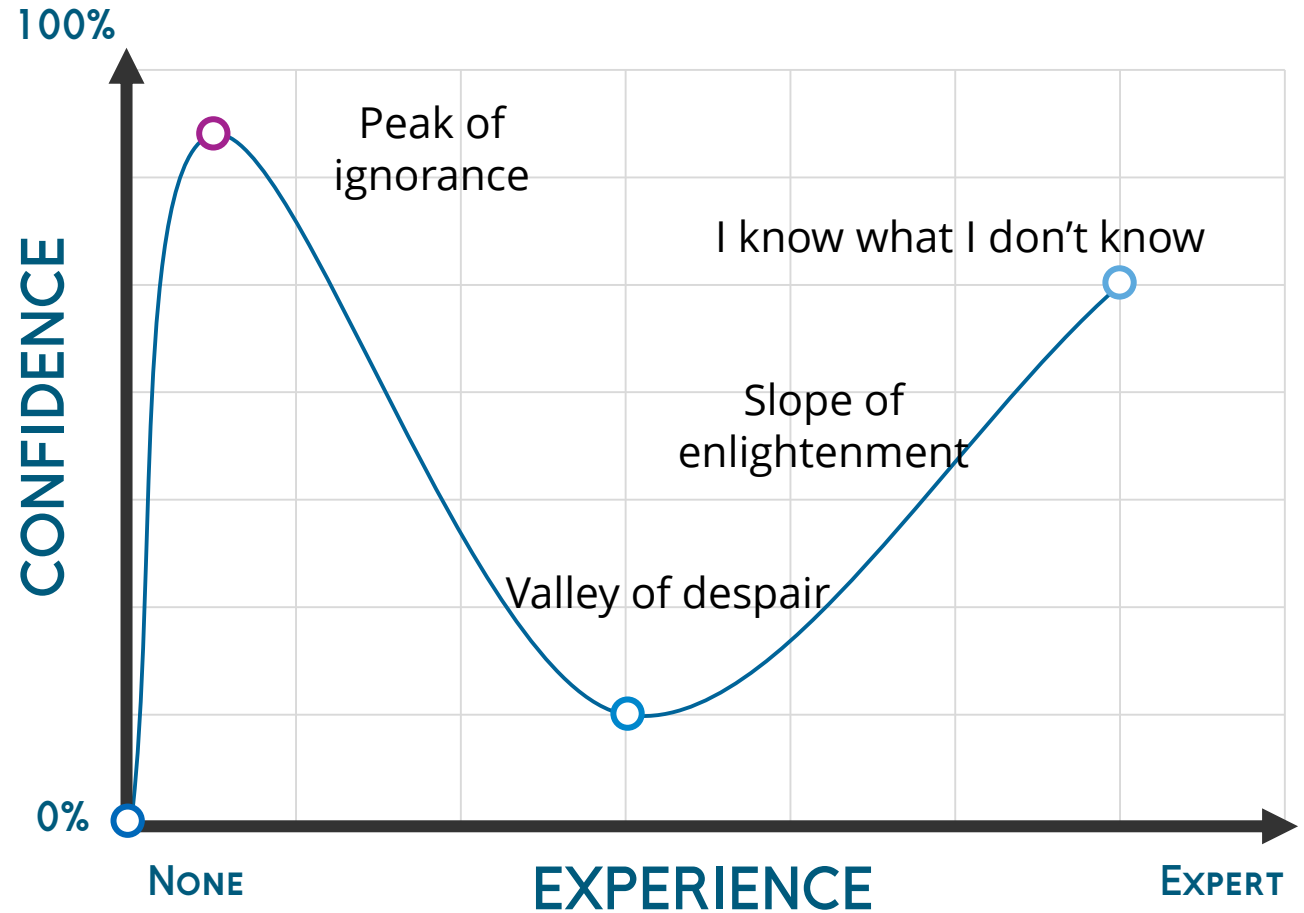
**Q: How confident are you in your ability to identify a phishing e-mail or a malicious link?**





## Bias: Dunning-Kruger Effect

A cognitive bias that leads people of limited skills or knowledge to mistakenly believe their abilities are greater than they are.



## Reporting phishing

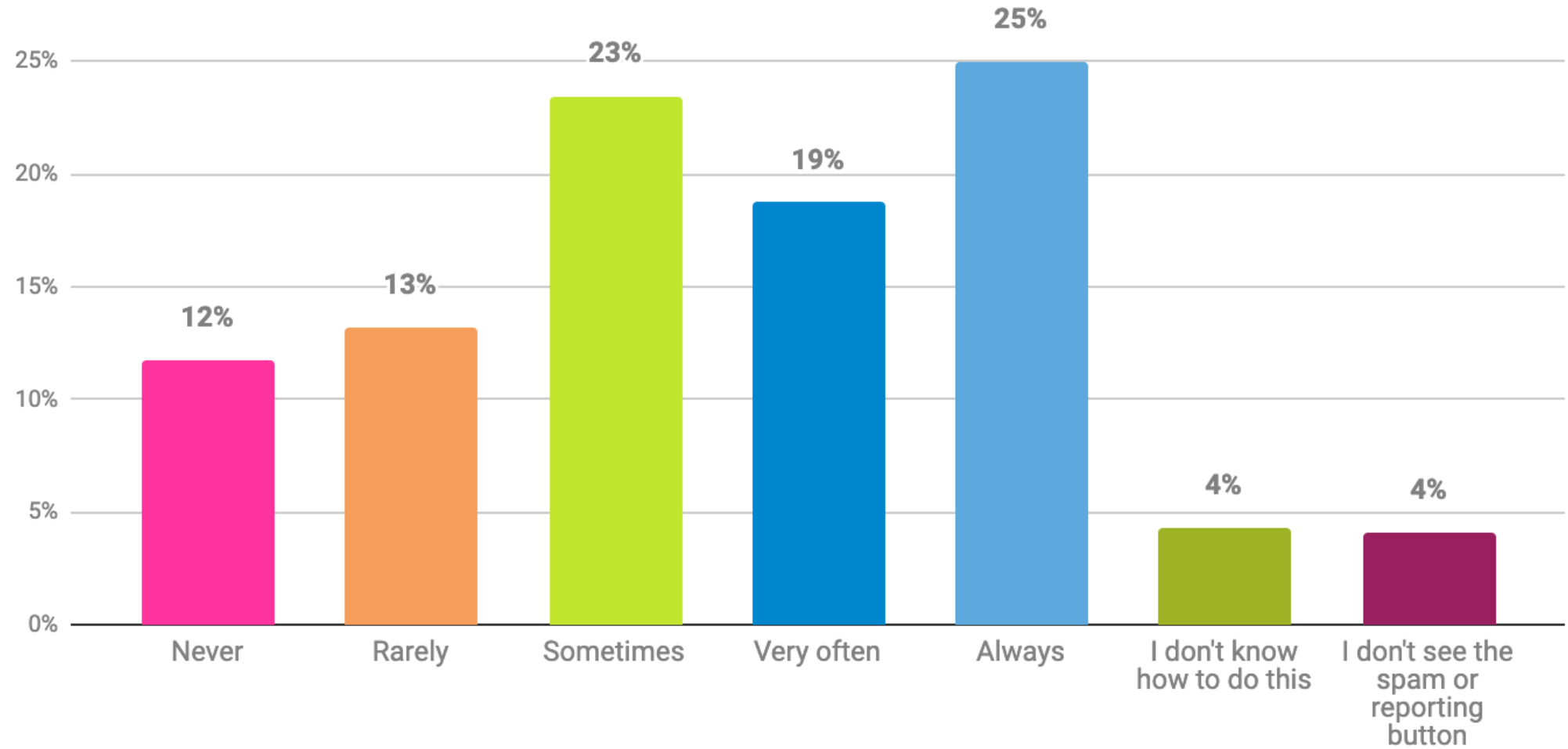
67%

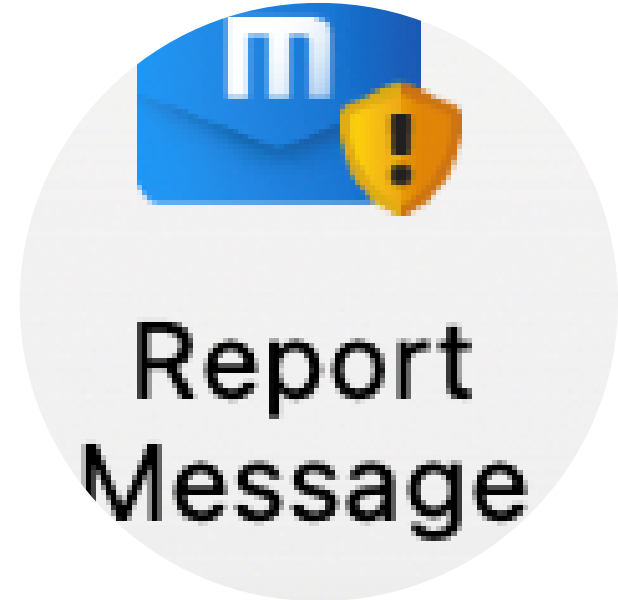
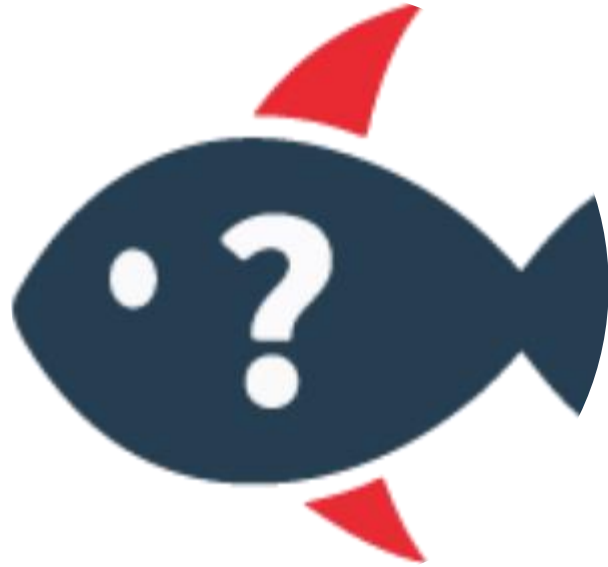
Very often or always check for phishing before clicking any links or responding.

72%

Sometimes, very often or always reach out to a person to verify a message that seems unusual.

*“How often do you report phishing messages using the ‘spam’ or ‘report phishing’ button?”*





# Passwords

Poll Question

**Q. How often do you use unique passwords for your important online accounts (e.g., email, social media, payment-related sites)?**

- a. All the time
- b. The majority of the time
- c. Half of the time
- d. Some of the time
- e. Never

## Poll Question

**Q. How often do you use unique passwords for your important online accounts (e.g., email, social media, payment-related sites)?**

- a. All the time **38%**
- b. The majority of the time **29%**
- c. Half of the time **14%**
- d. Some of the time **14%**
- e. Never **5%**

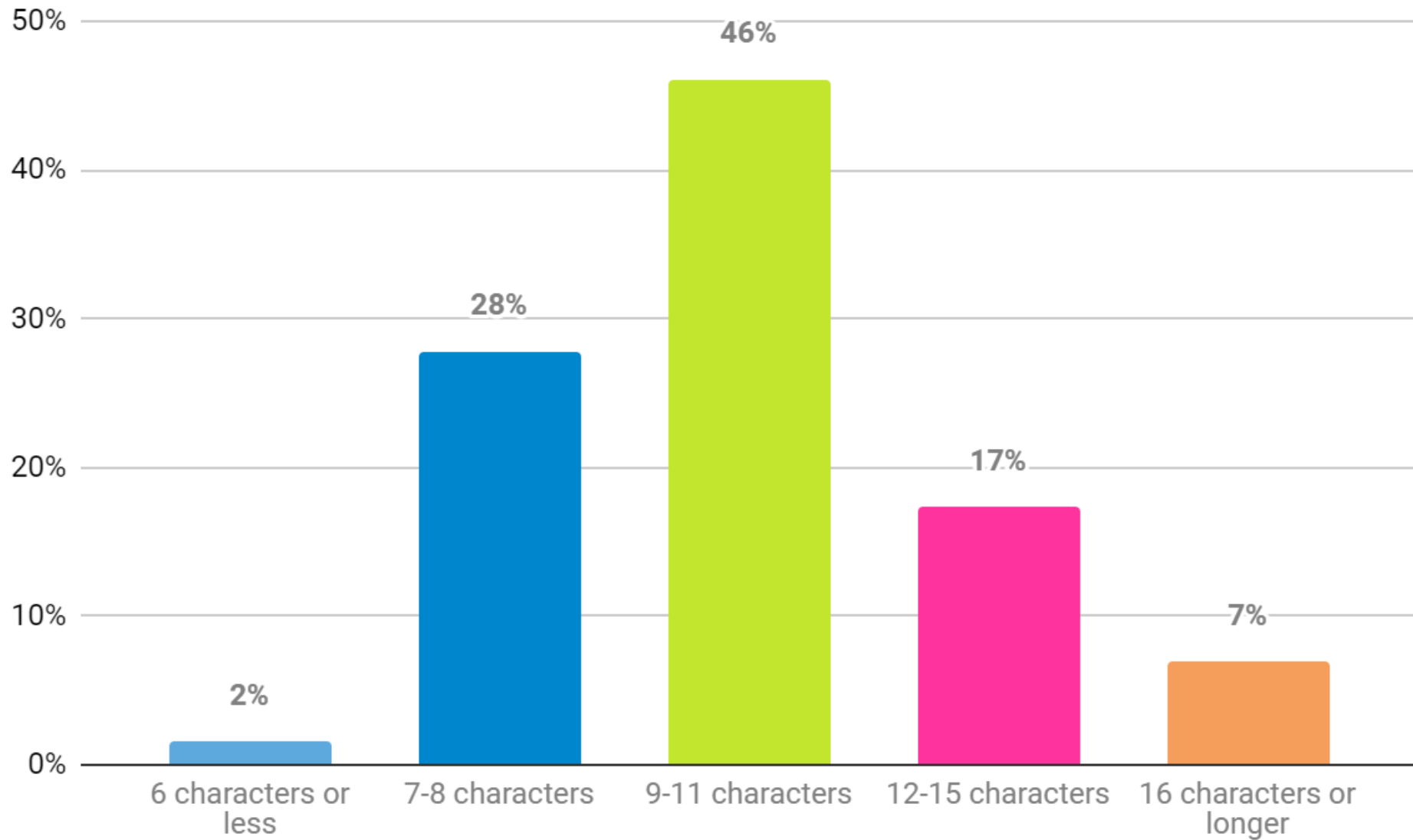
Poll Question

**Q. How long are the passwords you usually create?**

- a. 6 characters or less
- b. 7-8 characters
- c. 9-11 characters
- d. 12-15 characters
- e. 16 characters or longer



## Password Length



Poll Question

**Q. What is your preferred method of remembering multiple passwords?**

- a. I write them down in a notebook
- b. I write them down in a document on my computer
- c. I store them in my phone
- d. I store them in my email
- e. I just remember them (without writing them down)
- f. I save passwords in the browser
- g. I use a password manager application

**Q. What is your preferred method of remembering multiple passwords?**

- a. I write them down in a notebook **31%**
- b. I write them down in a document on my computer **5%**
- c. I store them in my phone **11%**
- d. I store them in my email **5%**
- e. I just remember them (without writing them down) **24%**
- f. I save passwords in the browser **9%**
- g. I use a password manager application **12%**
- h. Reset at each log in **3%**



# Multi- Factor Authentication

## Use of Multi-Factor Authentication (MFA)

**30% of the participants had never heard of MFA**

Of the participants who had heard about it:

- **79% applied it at least once**
- **94% of them reporting that they were still using MFA**

# Updates & Backing Up Data



## Updates

**35%** of people presume their devices are automatically secure

**17%** admitted to clicking 'remind me later' a few times

**60%** of participants 'always' or 'very often' installed the latest updates and software

**62%** of participants reported having turned on automatic updates

Backing Up

**48%** very often or always

**30%** sometimes

**22%** rarely or never



# Feelings

Poll Question

**Q. I find cybersecurity intimidating.**

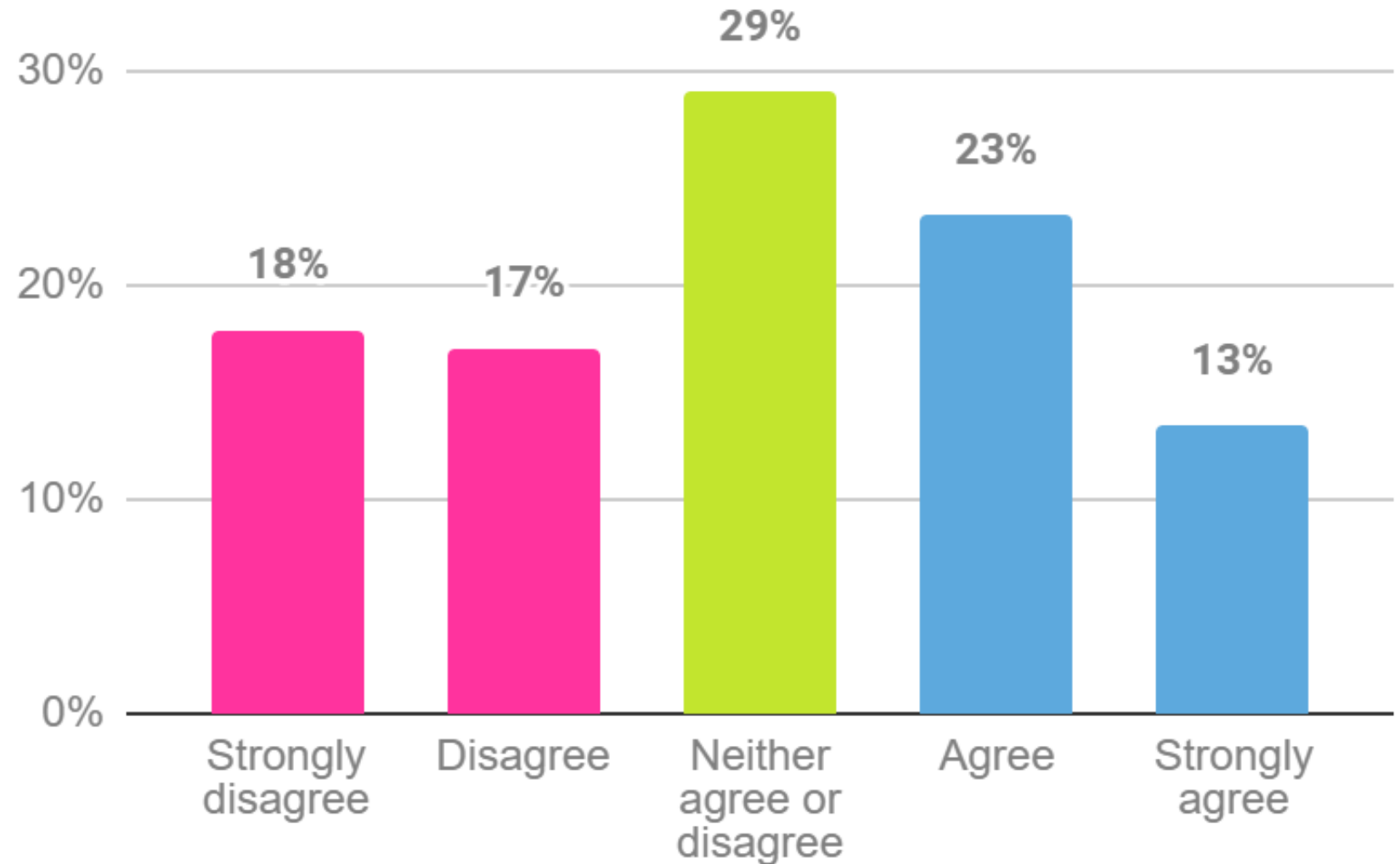
- a. Strongly Disagree
- b. Somewhat Disagree
- c. Neither Agree nor Disagree
- d. Somewhat Agree
- e. Strongly Agree

# Feelings of intimidation

**Q: How do you feel about cyber security?**

Statement:

***“I find cyber security intimidating.”***





Poll Question

**Q. I find staying secure online frustrating.**

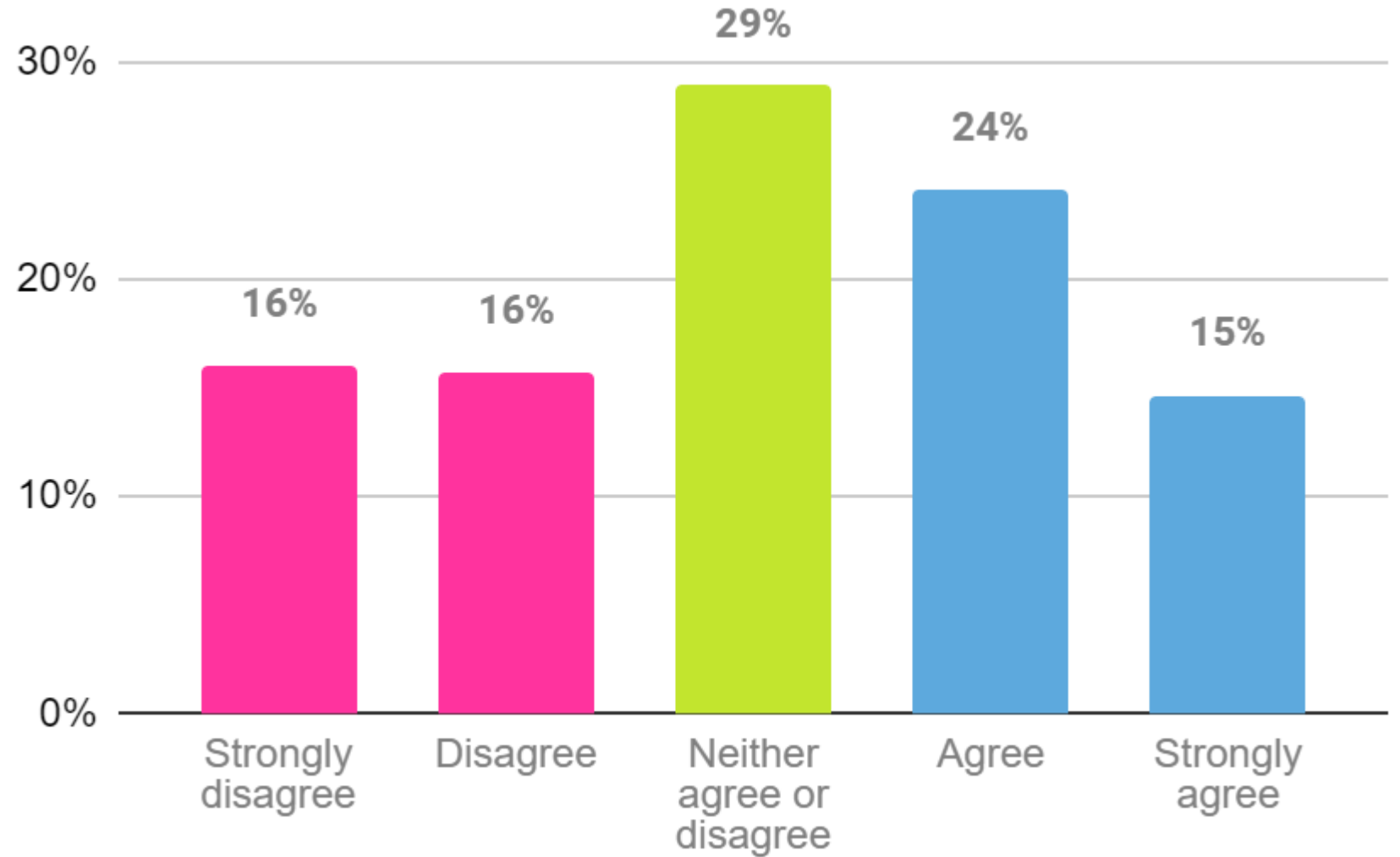
- a. Strongly Disagree
- b. Somewhat Disagree
- c. Neither Agree nor Disagree
- d. Somewhat Agree
- e. Strongly Agree

# Feelings of frustration

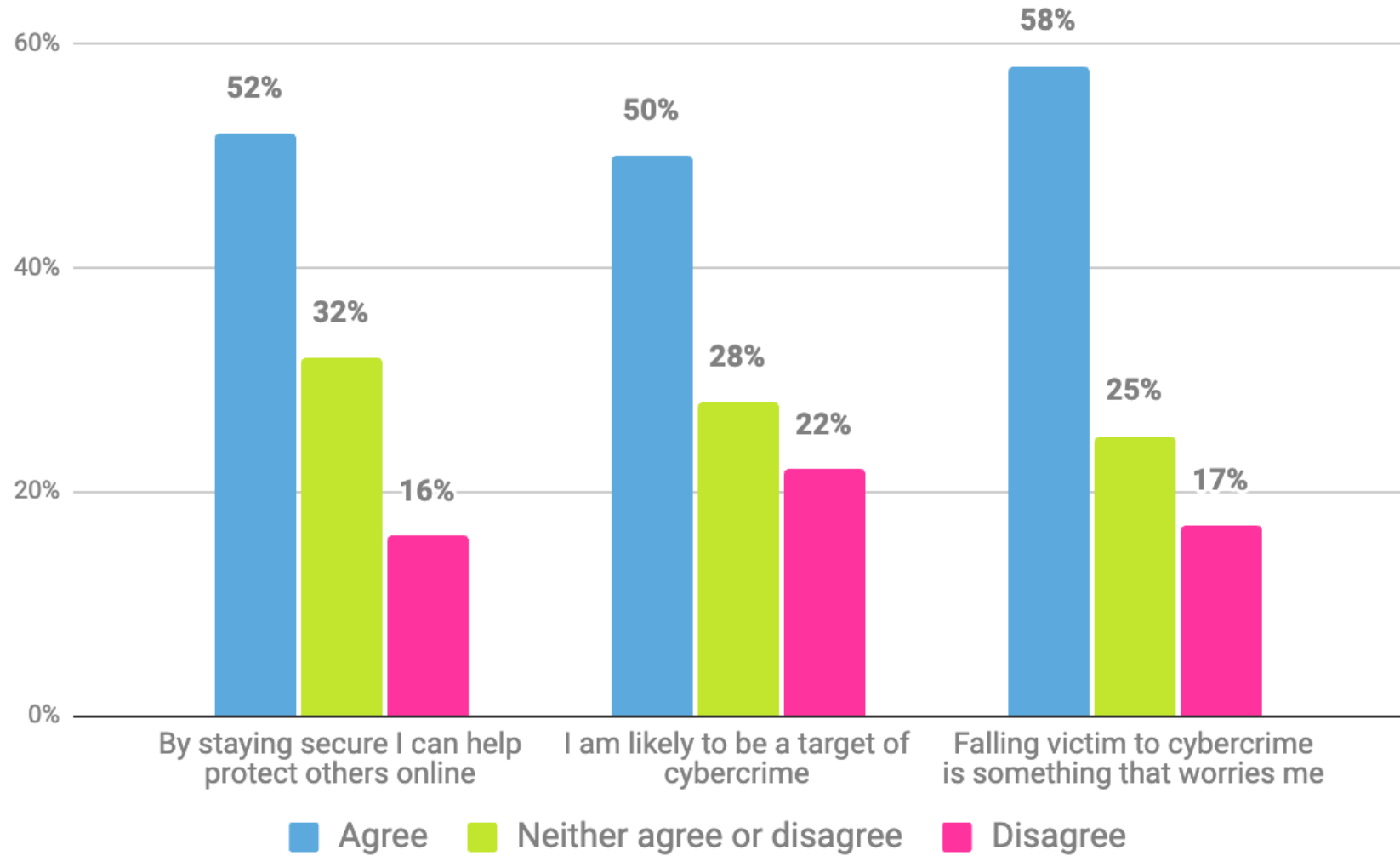
**Q: How do you feel about cyber security?**

Statement:

***“I find staying secure frustrating.”***



# Worry











```
1 0 0 1 0 1 0 1 0 1
0 1 0 1 1 0 1 0 1 0 0
1 0 1 0 0 1 0 1 0 1 1 1
0 1 0 1 1 0 1 0 1 0 0 1
```

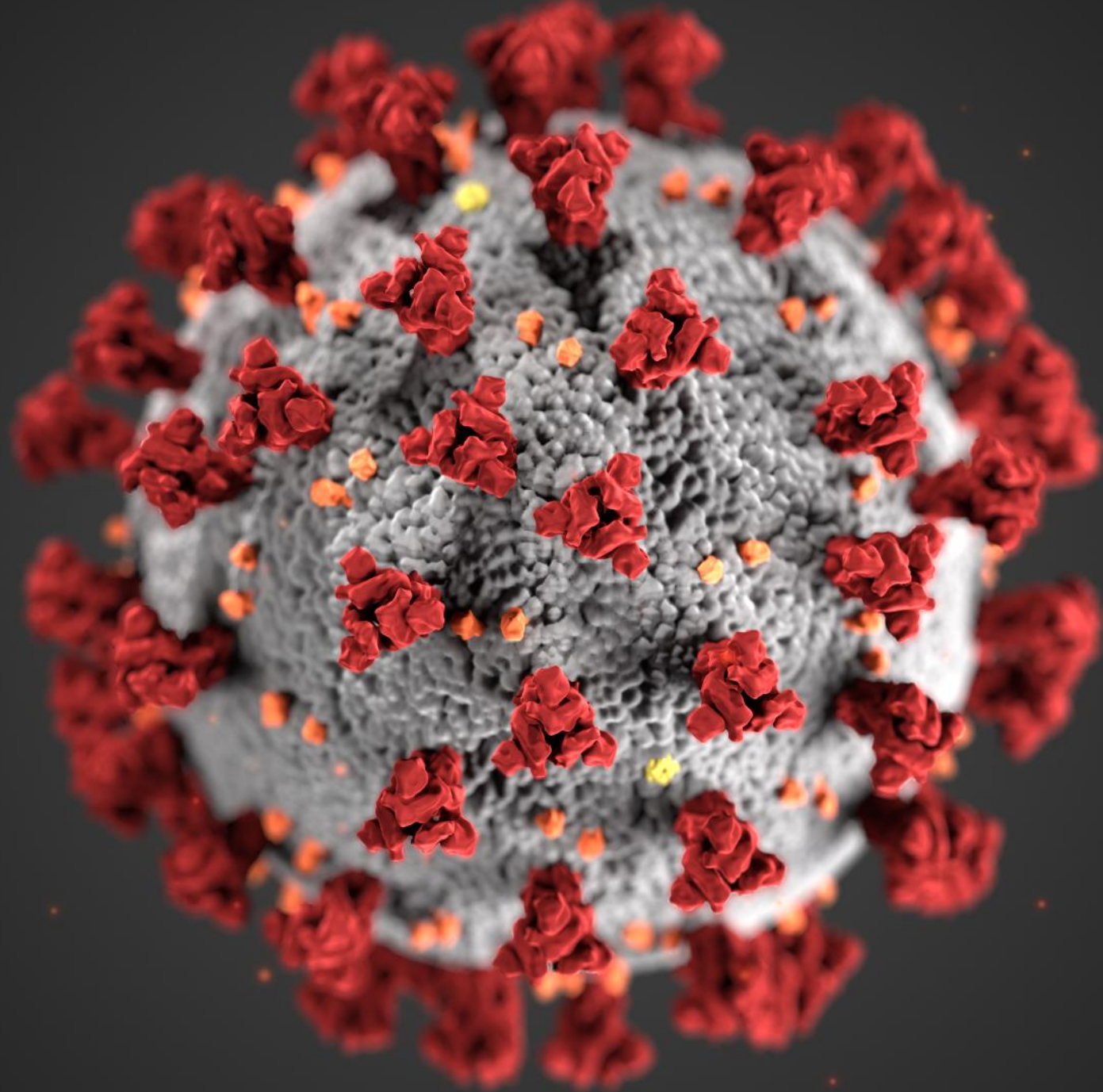
# HACKING DETECTED



**RISK ALERT**













# Silicon Valley Bank













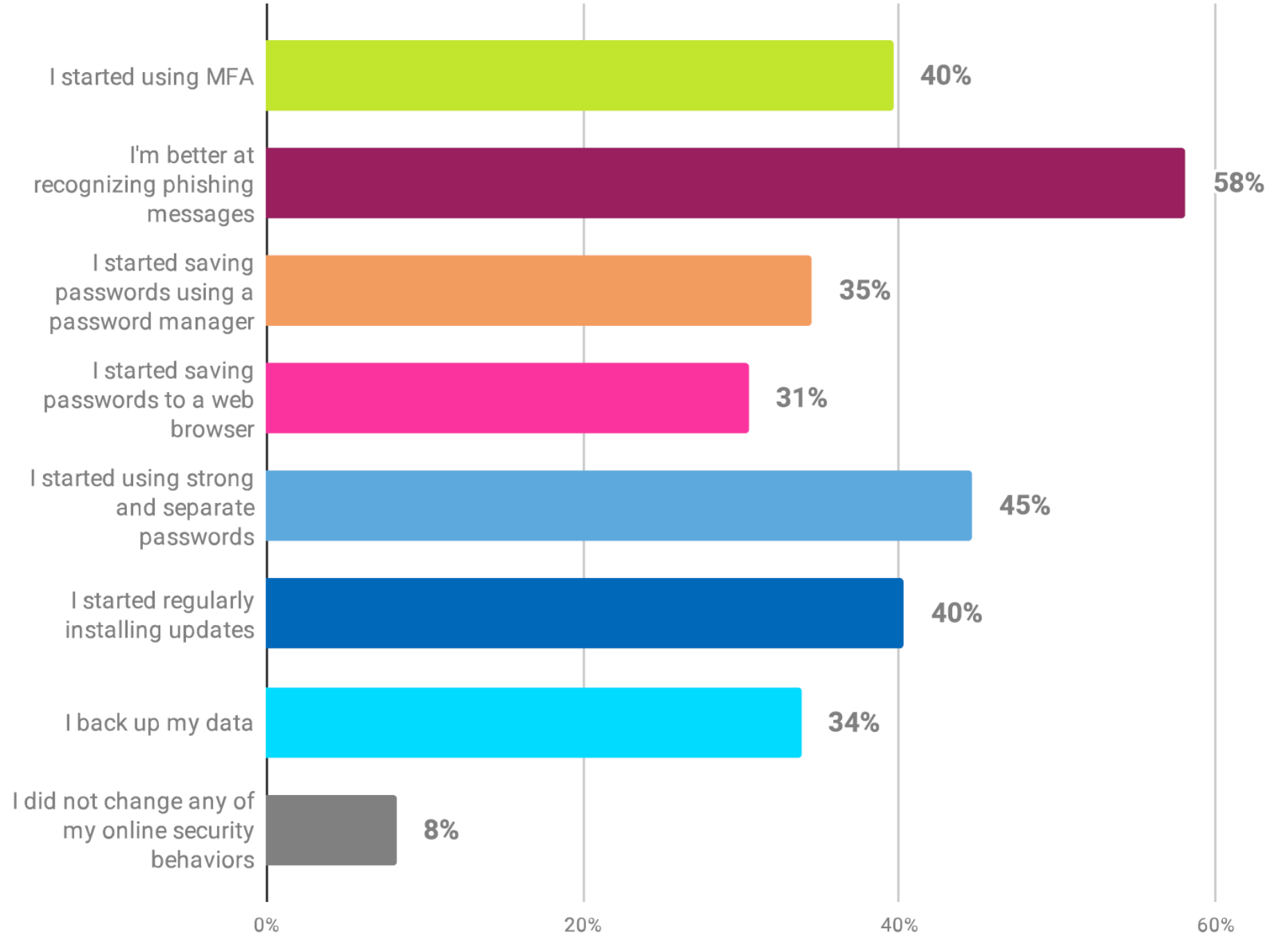


# Peace of Mind

Poll Question

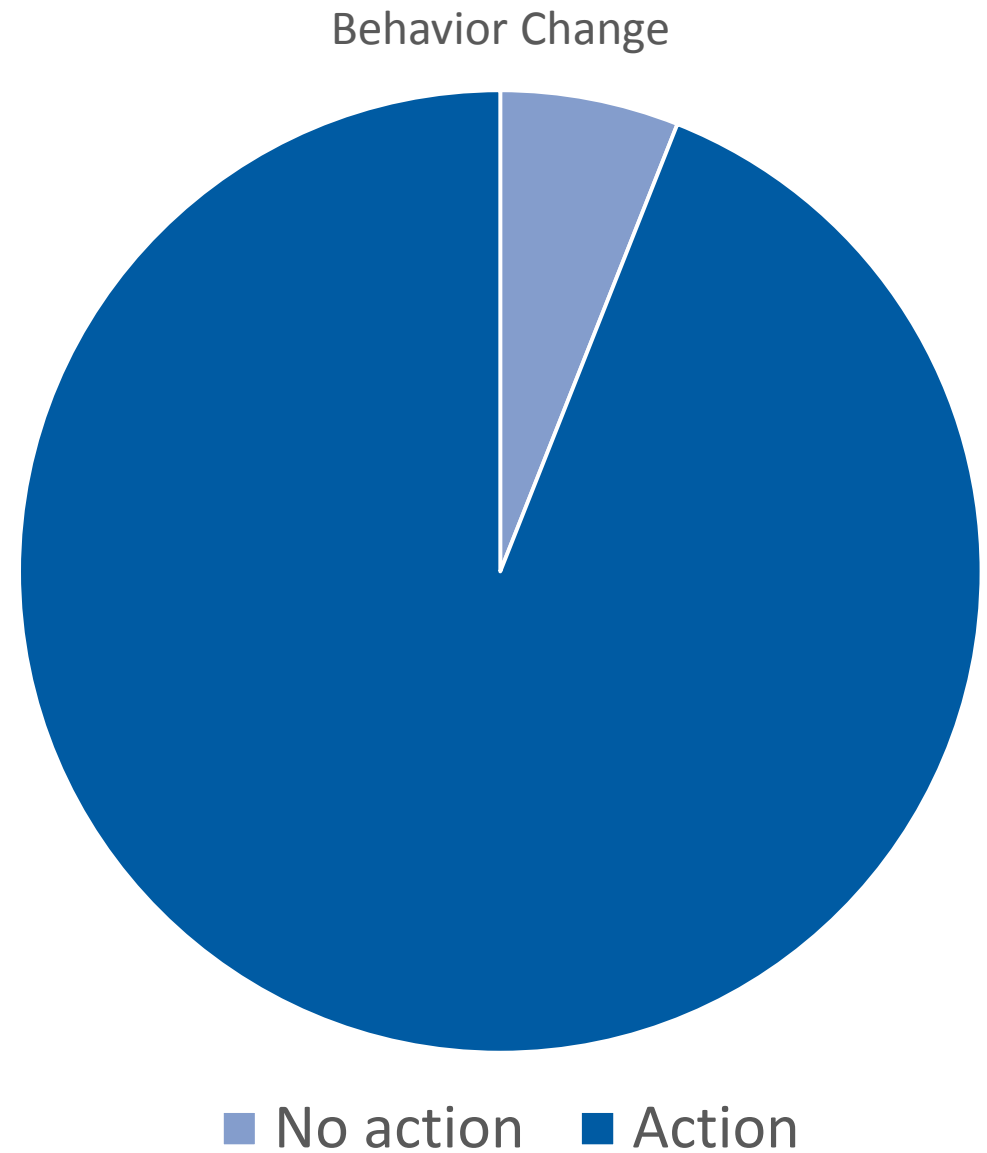
- Q. What, if any, security behaviors have you changed as a result of training? (check all that apply)**
- a. I started using MFA
  - b. I'm better at recognizing phishing
  - c. I started saving passwords in a password manager
  - d. I started saving passwords in a browser
  - e. I started using strong, unique passwords
  - f. I started regularly installing updates
  - g. I back up my data
  - h. I didn't change any of my behavior

# Security Behavior





only  
8%  
took *no action*



<https://kubikleseries.com/>

***Stay safe online.***



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ALLIANCE**

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[/national-cyber-security-alliance](https://www.linkedin.com/company/national-cyber-security-alliance)

Email

[info@staysafeonline.org](mailto:info@staysafeonline.org)